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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

DIVECHA, KAMAL B

ART UNIT	PAPER NUMBER
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2151

DATE MAILED: 06/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/972,568

Applicant(s)

FAYETTE, BRAD K.

Examiner

KAMAL B. DIVECHA

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/05/2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 October 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 20030321.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

The IDS filed on 03/21/2003 has been considered.

Drawings

1. The drawings are objected to because in figure 5 the small rectangular block present in between step 401 and step 501. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities: an applicant fails to show what the upgraded parameters are on page 8 and how are they upgraded.

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Also, applicant further discloses the phrase "fixed length header" in some part of the disclosure, for example: page 2 paragraph 5, and "fixed legacy message length" in other part such as on page 6 paragraph 6. It is unclear to the examiner where and what applicant is trying to teach.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 12 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claim 12 recites the limitation "said upgraded header" in line 14. There is insufficient antecedent basis for this limitation in the claim.
- Claim 13 recites the limitation "said upgraded parameter" in line 17. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6. Claims 1, 2, 6, 7, 8, 11-13, 15, 16, 18 and 19-21 are rejected under 35 U.S.C. 102(b) based upon the invention anticipated by Birdwell et al. (U.S. Patent No. 6,032,197).

Birdwell et al. discloses:

As per claim 1, A stateless protocol method (read as IP protocol), which is operable on a computer processor and computer memory, the stateless protocol comprising a computer program (figure 6), which configures the computer processor to: establish a legacy protocol (col. 1 L13-20), wherein said legacy protocol defines at least one legacy parameter for a header portion of a message (read as fragment field), and wherein said legacy protocol defines a fixed legacy header length (col. 4 L54-67 to col. 5 L1-10; col. 2 L12-67 to col. 3 L1-27; fig. 4 item #40); receive and inbound message having a header portion (col. 2 L23-26; col. 4 L41-44); allocate a memory portion from the computer memory, said memory portion having a depth corresponding to said fixed legacy header length (col. 3 L3-22; col. 6 L10-21); push said header portion of said inbound message onto said memory portion thereby forming a received header (fig. 8 item #112; col. 2 L25-26); and interpret said received header according to said legacy protocol (fig. 8 at item #26 comprising steps #108, 110, 112, 114, 116, 118 and 120; col. 4 L41-66).

As per claim 2, the stateless protocol method as in claim 1, further comprising a computer program which configures the computer processor to: establish an upgraded protocol, wherein said upgraded protocol includes said at least one legacy parameter of said legacy protocol, wherein said upgraded protocol defines at least one upgraded header parameter (read as compression key parameter #54 in figure 4 and 5) for said header portion, and wherein said upgraded protocol defines a fixed upgraded header length (col. 5 L4-65); wherein said memory

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portion has a depth corresponding to said upgraded header length (col. 6 L10-21); wherein said received header of said inbound message is interpreted according to said upgraded protocol if at least one upgraded header parameter is pushed on the memory portion (col. 4 L41-50; figure 7 #50 and #84: an uncompressed header comprising parameters shown in fig. 3); and wherein said received header of said inbound message is interpreted according to said legacy protocol when no upgraded header parameters are pushed on the memory portion (figure 7 #60: compressed header without non-changing parameter are interpreted and stored in header table #84).

As per claim 6, A stateless protocol method (read as IP protocol), which is operable on a computer processor and computer memory, the stateless protocol comprising a computer program (figure 6), which configures the computer processor to: establish a legacy protocol (col. 1 L13-20), wherein said legacy protocol defines at least one legacy parameter for a header portion of a message (read as fragment field), and wherein said legacy protocol defines a fixed legacy header length (col. 4 L54-67 to col. 5 L1-10; col. 2 L12-67 to col. 3 L1-27; fig. 4 item #40); construct a legacy header according to said legacy protocol (col. 4 L54-56); append said legacy header to outbound data thereby creating an outbound message (col. 6 L46-51); and send said outbound message (col. 6 L52-54).

As per claim 7, the stateless protocol method as in claim 6, further comprising a computer program which configures the computer processor to: establish an upgraded protocol, wherein said upgraded protocol includes said at least one legacy parameter of said legacy protocol (col. 5 L10-20), wherein said upgraded protocol defines at least one upgraded header parameter (col. 5 L20-30), and wherein said upgraded protocol defines a fixed upgraded header

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length (col. 5 L35-42); construct an upgraded header according to said upgraded protocol (col. 10 L38-40; col. 5 L55-58); and append said upgraded header to outbound data (col. 6 L46-51).

As per claim 8, the stateless protocol method as in claim 7 wherein the computer program configures the computer processor to append said upgraded header to outbound data wherein said at least one legacy parameter is proximate to said outbound data (col. 6 L46-51 and figure 5 block #62 comprising identification, flag and fragment offset fields is next to block #52 of data).

As per claim 11, A stateless protocol method (read as IP protocol), which is operable on a computer processor and computer memory, the stateless protocol comprising a computer program (figure 6), which configures the computer processor to: establish a legacy protocol (col. 1 L13-20), wherein said legacy protocol defines at least one legacy parameter for a header portion of a message (read as fragment field), and wherein said legacy protocol defines a fixed legacy header length (col. 4 L54-67 to col. 5 L1-10; col. 2 L12-67 to col. 3 L1-27; fig. 4 item #40); receive and inbound message having a header portion (col. 2 L23-26; col. 4 L41-44); allocate a memory portion from the computer memory, said memory portion having a depth corresponding to said fixed legacy header length (col. 3 L3-22; col. 6 L10-21); push said header portion of said inbound message onto said memory portion thereby forming a received header (fig. 8 item #112; col. 2 L25-26; col. 7 L25-30); interpret said received header according to said legacy protocol (fig. 8 at item #26 comprising steps #108, 110, 112, 114, 116, 118 and 120; col. 4 L41-66); construct a legacy header according to said legacy protocol (col. 4 L54-56); append said legacy header to outbound data thereby creating an outbound message (col. 6 L46-51); and send said outbound message (col. 6 L52-54).

As per claim 12, the stateless protocol method as in claim 11, further comprising a computer program which configures the computer processor to: establish an upgraded protocol, wherein said upgraded protocol includes said at least one legacy parameter of said legacy protocol, wherein said upgraded protocol defines at least one upgraded header parameter (read as compression key parameter #54 in figure 4 and 5) for said header portion, and wherein said upgraded protocol defines a fixed upgraded header length (col. 5 L4-65); wherein said memory portion has a depth corresponding to said upgraded header length (col. 6 L10-21); wherein said received header of said inbound message is interpreted according to said upgraded protocol if at least one upgraded header parameter is pushed on the memory portion (col. 4 L41-50; figure 7 #50 and #84: an uncompressed header comprising parameters shown in fig. 3); wherein said received header of said inbound message is interpreted according to said legacy protocol when no upgraded header parameters are pushed on the memory portion (figure 7 #60: compressed header without non-changing parameter are interpreted and stored in header table #84); construct an upgraded header according to said upgraded protocol (col. 10 L38-40; col. 5 L55-58); and append said upgraded header to outbound data (col. 6 L46-51).

As per claim 13, the stateless protocol method as in claim 11 further comprising a computer program which configures the computer processor to push said legacy parameter onto said memory portion before said upgraded is pushed onto said memory portion (figure 7 and col. 7 L15-67-col. 8 L1-6).

As per claims 15, 16, 18 and 19-21, they do not teach or further define over the claims 1, 2, 6, 7, 8, 11, 12 and 13. Therefore, claims 15, 16, 18, 19-21 are rejected for the same reasons as set forth in claims 1, 2, 6, 7, 8, 11, 12 and 13.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3 and 17 are rejected under 35 U.S.C. 103(a) as being obvious over Birdwell et al. (U.S. Patent No. 6,032,197) in view of Taylor (U.S. Patent No. 5,206,822).

Birdwell et al discloses all the limitations of claim 1 and 2.

However, Birdwell et al., does not explicitly disclose as per claim 3, the stateless protocol method as in claim 2 further comprising a computer program which configures the computer processor to: pad said memory portion with default padding values when said header portion of said inbound message does not fill said memory portion.

Taylor explicitly discloses method and apparatus for optimized processing of sparse matrices. Taylor further teaches a storage scheme where the memory is padded with zeros (read as default padding) (col. 3 L34-55).

At the time of the invention it would have been obvious to a person of ordinary skilled in the art to incorporate the teaching of Taylor as stated above with the system and method of Birdwell et al in order to pad the memory with default values.

The motivation for doing so would have been so that an efficient storage scheme is achieved and where there is structured data access (col. 6 L49-58).

As per claim 17, it does not teach or further define over the limitations in claim 3.

Therefore, claim 17 is rejected for the same reasons as set forth in claim 3.

9. Claims 4 and 9 are rejected under 35 U.S.C. 103(a) as being obvious over Birdwell et al. (U.S. Patent No. 6,032,197) in view of Malec et al. (U.S. Patent No. 4,973,952).

Birdwell et al discloses all the limitations of claim 1.

However, Birdwell et al., does not explicitly disclose as per claim 4, the stateless protocol method as in claim 1, wherein said legacy parameter comprises a value-type pair.

Malec et al., explicitly discloses a shopping cart display system. He teaches the format of the message block including headers and data, headers comprising the parameters such as flag character, length field, and type-value block, followed by a data field (col. 20 L18-43).

At the time of the invention it would have been obvious to a person of ordinary skilled in the art to incorporate the teaching of Malec et al as stated above with the system and method of Birdwell et al for including type-value parameter in the header.

One of ordinary skilled in the art would have been motivated because block type-value pairs would have been used to indicate that the data field is part of a message (Malec, col. 20 L24-25). Also, it would have showed the type of data either integer or character transmitted, which would have improved the processing speed at the receiver during data analysis.

As per claim 9, it does not teach or further define over the limitations in claim 4.
Therefore claim 9 is rejected for the same reason as set forth in claim 4.

10. Claims 5 and 10 are rejected under 35 U.S.C. 103(a) as being obvious over Birdwell et al. (U.S. Patent No. 6,032,197) in view of Boyer et al. (U.S. Patent No. 5,410,546).

Birdwell et al discloses all the limitations as in claim 1.

However, Birdwell et al does not explicitly disclose as per claim 5, the stateless protocol method as in claim 1, wherein said inbound message includes a data portion and wherein said header portion is pushed onto said memory portion after said data portion.

Boyer et al explicitly discloses a method and apparatus for computing CRC codes for fixed length page buffers of user data where the user data arrives from a transmission device in variable length packets with the packet contents being out of sequential order. He further teaches receiving inbound message with header and data portion and storing or loading data portion first followed by header portion (fig. 5, 6 and 7 and col. 5 L46-57; col. 2 L58-67).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of Boyer et al as stated above with the system and method of Birdwell et al in order to store data portion first following header portion.

The motivation for doing so would have been so that the data packets are stored and properly located in page buffer memory in real time as data packets are received out of order. This also alleviates the need for extra memory to double buffer a packet of data for reassembly of the packet (Boyer, col. 3 L3-10).

As per claim 10, it does not teach or further define over the limitations in claim 5. Therefore claim 10 is rejected for the same reason as set forth in claim 5.

11. Claims 14 and 22 are rejected under 35 U.S.C. 103(a) as being obvious over Birdwell et al. (U.S. Patent No. 6,032,197) in view of Bradshaw et al. (U.S. Patent No. 6,650,636 B1).

Birdwell et al discloses all the limitations of claim 11.

However, Birdwell does not explicitly disclose as per claim 14, the stateless protocol method as in claim 11 further comprising a computer program which configures the computer processor: to receive said inbound message from an upper layer application having a header portion in an upper layer format; and send said outbound message to a lower layer application.

Bradshaw et al., explicitly discloses transmission and reception of TCP/IP data over a wireless communication channel (see abstract). He further teaches encapsulating a message as it moves from one protocol layer to another (figure 1 message 46 passing through block #40 and 36) and the final message or packet is passed to lower layer protocol which is network access layer for the transmission (figure 1 block #32, 34 and 24).

At the time of the invention it would have been obvious to a person of ordinary skilled in the art to incorporate the teaching of Bradshaw et al as stated above with the system and method of Birdwell et al for the purpose of encapsulating and preparing the packet for transmission.

The motivation for doing so would have been so that the packet is transmitted to its destination improving transmission efficiency.

As per claim 22, it does not teach or further define over the limitations in claim 14. Therefore, claim 22 is rejected for the same reason as set forth in claim 14 above.

Additional References

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Mein et al. U.S. Patent No. 6,782,542 B1.
- b. Allard et al. U.S. Patent No. 6,370,561 B1.

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- c. Humphrey et al. U.S. Patent No. 6,396,853 B1.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAMAL B. DIVECHA whose telephone number is 571-272-5863. The examiner can normally be reached on 9.00am-5.30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung can be reached on 571-272-3939. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


ZARNI MAUNG
SUPERVISORY PATENT EXAMINER